navigable early in June, and Bering Strait about June 20. During August and September pack-ice lay from one to ten miles from the shore, between Point Barrow and the mouth of the Mackenzie River. The Institute repeats its appeal to all voyagers in the Arctic regions to forward all obtainable details for 1904 to its office in Copenhagen.

A RUSSIAN ARCTIC EXPEDITION.—*Nature* says that the St. Petersburg Physico-Chemical Society intends to send out an Arctic expedition for the observation of solar radiation and atmospheric refraction of cloud movements and of atmospheric electricity, in connection with the extinction of the ultra-violet light; also, for the determination of the phenomena of terrestrial magnetism and of electric currents in the ocean, for chemical analyses of the composition of the air and water, and for the examination of the polar ice.

SCIENTIFIC STATION ON THE ANTARCTIC.—By an arrangement between Mr. Bruce, leader of the Scottish National Antarctic Expedition, and the Argentine Government, the magnetic and meteorological station established by Mr. Bruce at Scotia Bay, in the South Orkneys, is to be continued by the latter. The buildings have been handed over to the Argentine Government, with provisions for eighteen months, and when Mr. Bruce returned south he took with him three Argentine scientists to man the station. The Argentine Government has offered the position of chief of the station to Mr. Robert C. Mossman. The results of the observations will be published by the Argentine Meteorological Office (*Scot. Geog. Mag.*, March, 1904).

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## NEW MAPS.

### AMERICA.

SOUTHERN PATAGONIA AND TIERRA DEL FUEGO.—The Land of Magallanes. Illustrating a paper by W. S. Barclay on the Fuegian tribes. Natural scale, 1:2,000,000, or 31.56 statute miles to an inch. *The Geographical Journal*, Jan., 1904. Shows by colors the habitat of the Ona Indians on the plains of eastern Tierra del Fuego, of the Alacaluf Indians along the western coasts of that island (Cape Horn and Beagle Channel), and of the Yahgan Indians along both shores of the western half of Magellan Strait. According to Mr. Barclay, these tribes are smaller than has usually been supposed. The Onas number about 600, and live entirely on land; the Alacalufs, nearly 800, live partly in canoes, partly on land; and the Yahgans, under 200, entirely canoe-dwellers.

UNITED STATES.—Economic Map of the Yukon River, Alaska. Scale, about fifty statute miles to an inch. By Arthur J. Collier. (Bulletin 218, U. S. Geological Survey.) Washington, D. C., 1903.

Shows the distribution of the coal-bearing rocks along the Yukon from Dawson to the mouth of the river. Eight coal mines and seven coal prospects are indicated between Forty Mile, near the International Boundary, and Anvik, on the lower river. All the Yukon coal of commercial importance is of Cretaceous or Tertiary age, but it has not been found feasible, as yet, to differentiate the Cretaceous from the Tertiary coals. The map also shows the areas of non-coal-bearing rocks as far as known.

UNITED STATES.—Geological Reconnaissance map of Nevada south of the 40th parallel and adjacent California. Scale, about 14.5 miles to an inch. By J. E. Spurr. (Bulletin 208, U. S. Geological Survey.) Washington, 1903.

The map illustrates what is known of the geology of Nevada south of the 40th parallel, and is based upon Mr. Spurr's own journey in 1899, the Wheeler and Fortieth Parallel surveys and the routes of Emmons, Gilbert, Turner's reconnaissance map and the very recent journeys of Weeks and Rowe. While the map, as the compiler says, lacks a suitable topographic base, the peculiar conditions in Nevada, with its clear air, lack of vegetation, and the general continuity of formations parallel with the north-south ranges combine to make the reconnaissance fairly satisfactory.

THE UNITED STATES.—Geologic Atlas of the United States. No. 95. Columbia Folio. Tennessee. Area, 969 square miles to an inch. Between parallels 35° 30′ and 36° and meridians 87° and 87° 30′. In the Ohio basin, and drained chiefly by the Duck River, the surface is the result of the dissection of a level or gentle undulating plain. The rocks are all of sedimentary origin, and represent deposition in portions of the Silurian, Devonian and Carboniferous periods. Mineral resources, chiefly rock phosphates and iron ore; also building stone, limestone for flux and lime and road material. Most of the soils are highly productive, and the Bigby limestone disintegrates into the best of blue grass land.

## EUROPE.

AUSTRIA-HUNGARY.—Eisenbahn- und Postkarte von Oesterreich-Ungarn. Natural scale, 1:1,500,000, or 23.6 statute miles to an inch. With 6 inset maps, including Vienna, Budapest, Prague, and northwest Bohemia. Fourth Edition. Artaria & Co., Vienna, 1904. Price, 2.20 k.

Example of an excellent European railroad map, containing a large amount of information, even to the side of the tracks on which the stations are situated. An index makes it easy to find every station.

ENGLAND.—Geographical Distribution of Vegetation in the Basins of the Rivers Eden, Tees, Tyne and Wear—Part 1. Natural scale, 1:63,360, or 1 statute mile to an inch. By Francis J. Lewis, F.L.S., *The Geographical Journal*, London, March, 1904.

An excellent specimen of botanical mapping. Nineteen symbols in colours are used to show cultivation and the dominant varieties of vegetation in woodland, sub-Alpine moorland and Alpine moorland (the Pennines). Rivers and streams exceeding 15 feet in width are shown by two lines. Part I includes the southern part of the region surveyed, and Part II will embrace the northern portion.

FRANCE.—Carte de la Circonscription de la Chambre de Commerce de Boulogne-sur-Mer. No scale. The Chamber of Commerce, Boulogne, 1903.

A black-and-white map showing Boulogne and the commercial district around it on a scale so large that there is room to enumerate the characteristic industries of each town, under its name; to show the distribution of agriculture and stock-raising, and all the ways of communication from the single and double track railroad to the com-

mon roads. All the steamship connections of Boulogne are shown. The map appears, together with a plan of the port and other illustrations, in a special report of the Chamber of Commerce on the navigation, fisheries, commerce, and industries of Boulogne.

GERMANY.—De Havens van Emden en Delfzijl. Natural scale, 1:400,000. *Tijdschrift* of the Royal Netherlands Geographical Society, Vol. XXI, No. 2, 1904.

The above scale as *Tijdschrift* prints it is apparently a typographical error for 1:100,000, or 1.5 statute miles to an inch.

The scale is large enough to give a fair idea of the water improvements between the Ems River and Emden which have turned that haven into an important seaport.

RUSSIAN EMPIRE.—The Russian Empire. Natural scale, 1:8,400,000, or 132.4 statute miles to an inch. Compiled by Lieut.-Gen. Koverski. Golike & Vilborg, St. Petersburg, 1902. (Presented by Lieut.-Gen. Koverski.)

Printed in Russian, and an excellent specimen of cartography. Its information with regard to caravan and all other interior routes is fuller and more clearly expressed than on most maps of this small scale. Many desert and steppe routes in Russian Turkestan and Mongolia, with hundreds of halting places along them, are shown. The nomenclature is especially copious, and most of all along the ways of travel, whether railroad, river, common road, or caravan track. In fact, topographic delineation is almost entirely sacrificed to the purpose of showing all the routes and the places which they serve.

## AFRICA.

GERMAN SOUTHWEST AFRICA.—Das Dreiecksnetz der Deutsch-Englischen Grenze-Expedition in Deutsch-Südwestafrika. Natural scale, 1:1,500,000, or 23.6 statute miles to an inch. By members of the expedition. Mitteilungen von Forschungsreisenden und Gelehrten aus den Deutschen Schutzgebieten, Vol. XVII, No. 1, Berlin, 1904.

Shows the primary triangulation between 23° and 27° S. Lat., by which the position of the boundary line between German Southwest Africa and British Bechuanaland, along the 20th meridian east of Greenwich, was established, and the co-ordinates of many conspicuous topographic features and some settlements were ascertained. A large part of this boundary is now marked by iron posts.

BRITISH EAST AFRICA.—Map of Kavirondo and neighbouring country, showing racial distribution. Natural scale, 1:950,400, or 15 statute miles to an inch. Occasional Papers, No. 1. Anthropological Institute of Great Britain and Ireland. London, 1902.

Illustrating the ethnological survey of C. W. Hobley on the northeast side of Victoria Nyanza. The habitat of the four groups of natives—the Bantu and Nilotic Kavirondo and the Nandi and Masai groups, living between the lake and the highest points of the Mau plateau—are shown in colours.

EAST AFRICA.—Skizze der Ostafrikanischen Bahnen und Bahnprojekte. Scale, 1:4,000,000, or 63.1 statute miles to an inch. By H. Werther. *Koloniale-Zeitschrift*, Vol. V, No. 5. Berlin, 1904.

This is reproduced from a pen sketch, showing clearly though roughly the proposed routes of the railroads in German East Africa. These routes are: 1. The Central R.R. from Tanga, the northern port, via Korogwe and Tabora to Ujiji on Lake Tanganyika; 2. The Central R.R. from Dar es Salâm to Taboro and Ujiji (alternative project favoured by the Government); 3. The Nyasa R.R. from Kilwa, one of the southern ports, to Wiedhafen, on the northeast coast of Lake Nyasa, with an extension to Bismarckburg, near the southern end of Lake Tanganyika.

## ASIA.

ASIA.—Stanford's Library Map of Asia. Natural scale, 1:6,969,600, or 110 statute miles to an inch. Edward Stanford. London, 1903.

The new edition of Stanford's map of Asia, in 4 sheets. One of the most important changes on it is the rectification of the eastern boundary of Burma in accordance with recent agreements, by which the frontier is extended to the Yünnan province of China; and is further changed in relation to the western frontiers of Siam and Indo-China. Nine scales of national linear measurements are given.

BURMA.—Britisch Birma, Nach den neuesten Grenzbestimmungen auf Grund amtlicher Quellen. Natural scale, 1:6,000,000, or 97.8 statute miles to an inch. *Petermanns Mitteilungen*, Vol. 49, No. XII. Gotha, 1903.

The map shows the extension of the British domain to the east by arrangements with Siam, China and France, so that Burma now includes the Shan States and reaches to Yünnan, extends east of the Salwen river in the lower part of its course, and its frontier along the French possessions of Indo-China has been delimited. Mixed commissions have erected boundary posts along the entire eastern frontier. The British military stations in the Shan States, and the railroads built and projected throughout Burma, are indicated.

CHINA.—OSTCHINA. Natural scale, 1:1,000,000, or 15.7 statute miles to an inch. Twelve sheets. Royal Prussian Land Survey. Berlin, 1902–1904. Price, 1.5 marks a sheet.

The map, in process of production for two years, is one of the fullest and most accurate maps of the eastern part of the Chinese Empire. It extends, in the west, to the plains of eastern Sechwan. Considerable contributions to parts of the map were made by sheets, still unpublished, of Richthofen's Atlas von China. Only the German routes among the projected railroads are shown, as adequate material was found only for them.

CHINA.—Sketch Map of the Upper Yang-tse Region. Natural scale, 1:5,000,000, or 78.89 statute miles to an inch. By Lieut.-Col. C. C. Manifold. *The Geographical Journal*, London, March, 1904.

The map distinguishes between western Sechwan (mountainous) and eastern Sechwan (the Red Basin), the latter very densely populated and thoroughly cultivated; also indicates the navigable stretches of the Yangtse in the region of gorges and rapids above Ichang, the head of navigation for large vessels, to Ping-shan-hsien, above which point the river is not navigable for any kind of craft. An inset shows the routes of Lieut.-Col. Manifold from Bhamo, Burma, to Peking.

CHINA AND KOREA.—Coasts of China and Korea, including the Gulfs of Pechili and Liaotung and the northern part of the Yellow Sea. Chart 1303. Hydrographic Office, Washington, D. C., 1904.

This chart is marked "Corrected to April 1, 1904." The words "Reported to be entirely incorrect" are printed along the northeastern side of Korea Bay. They might well have been extended further west, to the lower Yalu River. The town of Wiju is shown clear to the north of the widening of the river, in a position which it has not occupied on the best maps since the publication of the map of Korea in *Petermanns Mitteilungen* (1883).

EAST ASIA.—Politisch Militärische Karte von Ost-Asien. Natural scale, 1:7,500,000, or 118.35 statute miles to an inch. By Paul Langhans. Justus Perthes, Gotha, 1904.

A map of Japan, Korea, and Eastern China, with particular reference to the

present war. Treaty and naval ports, fortified towns, and Christian Mission Stations(!) are indicated. The broad features of topography and the means of inland and sea communication are quite clearly shown, but the scale is too small to give all the place-names of importance. Masanpho is incorrectly shown as a Russian naval station. The value of the map is much enhanced by inset maps showing the most important ports and strategic points on a much larger scale.

EAST INDIES.—Tiefen des östlichen Teiles des Hinterindischen Archipels Natural scale, 1:9,000,000, or 142.4 statute miles to an inch. After G. F. Tydeman 1902. *Annalen der Hydrographie, &c.* No. III, 1904, Berlin.

The results of the soundings of the Siboga Expedition in the part of the East Indies Archipelago, between Borneo and New Guinea, are generalized on this small map, depths from 200 to over 6,000 metres being indicated. The map illustrates a paper on the work of this Dutch expedition.

JAPAN.—General Railway Map of Japan. Scale, 13.3 miles to an inch. 1902. Presented by the Department of Communications, Tokyo.

A map, with English and Japanese nomenclature, on so large a scale that the country cross roads, as well as the main trunk roads, are shown. The Government railroads are distinguished from those in private hands, and the single and double track lines are denoted. Elevations above sea-level are given in English feet. Large insets show the railroads of Formosa and the cities of Tokio, Kioto, and Osaka, with their environs.

TIBET.—Plan of Lhasa. Natural scale, 1:16,000, or 1 statute mile to 3.96 inches. Compiled from native information by Lieut.-Col. L. A. Waddell. *The Geographical Journal*, London, March, 1904.

A black-and-white map, showing in considerable detail, and, as the compiler believes, with fair accuracy, the leading landmarks of this forbidden city. Ninety different features are indicated from the palace of the Grand Lama and other palaces, public buildings and monasteries and important residences, to the shops and markets, Chinese theatre, cemeteries, the walled dancing ground, racecourse, tilled areas and pastures, roads, and bridges. An inset, showing the environs of Lhasa, is based on the map of A. K., the Indian surveyor, but shows more detail. This interesting product was evidently a work of great labour.

## POLAR.

BARENTS SEA.—Hydrologische Karte des Barents-Meeres. Scale, 1:6,000,000, or 97.8 statute miles to an inch. By Dr. L. Breitfuss. *Petermanns Mitteilungen*, No. II, 1904. Justus Perthes, Gotha.

Dr. Breitfuss's map is based upon the Russian hydrographic work in 1902, and earlier, between Novaya Zemlia and Spitzbergen, to the north of the Russian coast. The map, with the accompanying profiles, illustrates important additions to our knowledge of these waters in respect to depths, distribution of temperature, salinity, currents, and other phenomena. These researches will receive more extended notice in a later number of the BULLETIN.